means for calculating a perturbation model, said perturbation model indicating a change in said model data which reduces said error measurement;

means for adjusting said model data in accordance with said perturbation model; and

means for calculating the range from said model data.

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35. (Amended) An apparatus for determining the range between the target plane and a monitoring plane comprising:

a passive receiver for collecting actual flight path data of the target plane;

a processor for generating model data corresponding to selected parameters describing flight path characteristics of the target plane; and

said processor calculating a flight path of the monitoring plane which optimizes ranging performance.

REMARKS

In response to the Office Action dated November 30, 1988, Applicants have amended independent claims 1, 10, 15, 20, 30, and 35. Claims 1-39 are currently pending in the application.

The Examiner has rejected Claims 1-4 and 20-24 under 35 U.S.C. 102(b) as being anticipated by Gendreu or Rawicz. Applicants have amended independent claims 1 and 20 to overcome this rejection.

Applicants disclose "a method of" (Claim 1) and "an apparatus for" (Claim 20) "determining the range between a target plane and a monitoring plane" which require "passively collecting actual flight path data". Neither of the cited references

(Gendreu or Rawicz) teach or disclose this structural difference. One of the advantages afforded by Applicants' invention over those disclosed by Gendreu and Rawicz is indicated at page 8 of the Specification: "Since ownship 10 is using a passive ranging system, i.e., not transmitting energy signals itself, ownship 10 may be able to locate target 12 without reciprocal detection. This results in a primmary advantage of passive ranging, namely, stealth." Neither Gendreu or Rawicz teach or disclose this.

Both cited references clearly disclose active aircraft ranging apparatuses, employing active sensors such as radar, which will permit the target to detect them. (For example, Gendreu: FIG. 1, Col. 2, line 65-Col. 3, line 6, and Col. 5, lines 33-34; Rawicz: Col. 2, lines 55-64, and Col. 3, line 66-Col. 4, line 5.) Neither reference could work using actual flight path data which had been passively collected.

As illustrated by the above remarks, the present invention is both structurally and functionally distinguishable from the Gendreu or Rawicz devices. A proper U.S.C. 102 rejection requires that each of the elements of Applicant's claimed invention be disclosed in a single prior art reference and that such reference discloses an invention which operates in substantially the same manner to achive substantially the same results as the claimed device. Accordingly, the present invention is not anticipated by the cited and applied prior art. Therefore, independent claims 1 and 20 should be allowed, and dependent claims 2-4 and 21-23, respectively should also be allowed as depending from allowable independent claims.

Independent claims 10 and 30 were rejected under 35 U.S.C. 103 as being obvious over Gendreu or Rawicz in view of Newell et

al. In light of the above remarks, this rejection is respectfully traversed.

Applicants' invention requires "passively collecting actual flight path data" (Claim 10) or "means for passively collecting actual flight path data" (Claim 30). As mentioned above, neither of the cited references (Gendreu or Rawicz) teach or disclose this structural difference. Newell et al. also fails to teach or disclose this structural difference because it discloses a target course predictor for gun fire control requiring active sensor input (Col. 1, line 53).

Not only does combination of Gendreu or Rawicz with Newell et al. fail to meet Applicants' disclosed structure or method, nowhere in any of these references is such a combination suggested. Therefore, independent claims 10 and 30 should be allowed.

Claims 15 and 35 were rejected under 35 U.S.C. 103 as being obvious over Gendreu or Rawicz in view of Golinsky. In light of the above remarks, this rejection is respectfully traversed.

Furthermore, it would not have been obvious to one of ordinary skill in the art to have combined a passive reference (Golinsky) with the cited active sensor references (Gendreu and Rawicz) because they employ entirely different algorithms.

Not only does combination of either of these references with Golinsky fail to meet Applicants' disclosed structure or method, nowhere in any of these references is such a combination suggested. Therefore, independent claims 15 and 35 should be allowed.

Claims 17 and 37 were rejected under 35 U.S.C. 103 as being obvious over Gendreu or Rawicz in view of Fukuhara et al. In light of the above remarks, this rejection is respectfully traversed. Dependent claims 17 and 37 depend from allowable independent claims 15 and 35 and therefore it is improper to reject these dependent claims.

Additionally, Fukuhara et al. discloses a position measuring system for a vehicle requiring active sensor input (Col. 1, lines 8-11; Col. 2, lines 5-11; Col. 9, lines 44-45, etc.). Combination of either Gendreu or Rawicz with Fukuhara et al. fails to meet Applicants' disclosed structure or method, and nowhere in any of these references is such a combination suggested. Therefore, dependent claims 17 and 37 should be allowed.

The cited but not applied art of record has been considered but is not deemed to affect the patentability of the pending claims.

It is respectfully submitted that the amended claims recite the patentably distinguishing features of the invention and that, taken together with the above remarks, the present application is now in proper form for allowance. Re-examination and reconsideration of the application, as amended, are requested. Allowance of the claims at an early date is solicited.

Respectfully submitted,

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